

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

Claims 29, 38-40, and 45-48 are pending in this application. Claims 21-23 and 25-27 are canceled by the present response without prejudice and Claims 47 and 48 are added by the present response. Claims 21, 23, 25, 27, 29, and 38-44 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. patent 5,165,162 to Charles. Claims 45 and 46 are allowed. Claims 22 and 26 were objected to as dependent upon rejected base claims, but were noted as allowable if rewritten in independent form to include all of the limitations of their base claims and any intervening claims. Applicants gratefully acknowledge that indication of allowable subject matter.

Addressing now the above-noted rejection based on Charles, that rejection is traversed by the present response.

Claims 29 and 38-40 are amended by the present response to clarify features recited therein. The claim amendments are not believed to raise any issues that would not preclude entry of the present Amendment After Final. Specifically, each of claims 29 and 38-40 is amended by the present response to incorporate the limitations from previously pending dependent claims 41-44, respectively. Thus, those claim amendments correspond to subject matter previously presented.

The present response also sets forth new independent claims 47 and 48 for examination, but those claims also present subject matter already considered in the Office Action. Specifically, new independent claim 47 corresponds to previously pending dependent claim 22 rewritten in independent form and new independent claim 48 corresponds to previously pending dependent claim 26 rewritten in independent form. Applicants also note that previously pending dependent claims 22 and 26 were noted as allowable, and thus

new independent claims 47 and 48 set forth subject matter indicated as allowable in the outstanding Office Action.

With respect to the rejection of claims 29 and 38-40, again that subject matter corresponding to previously pending dependent claims 41-44, that rejection is traversed by the present response.

Initially, applicants note that in the Amendment filed March 30, 2004 new dependent claims 41-44 were presented for examination. The outstanding rejection has not even addressed the subject matter in those claims, and thus clearly the outstanding rejection has not set forth a proper *prima facie* case of anticipation of those claims over the teachings in Charles. The outstanding rejection has merely repeated the previous rejection without addressing the subject matter in previously added dependent claims 41-44, and as now recited in respective independent claims 29 and 38-40.

Moreover, applicants respectfully submit Charles does not teach or suggest the features now recited in independent claims 29 and 38-40, specifically that the resonant frequency f_r is given by relationship:

$$f_r = \sqrt{C \left(\frac{1}{\mu_s} + \frac{e}{p} \right)}$$

in which C is a constant, μ_s is static value of intrinsic permeability, e is the width of the plurality of gaps, and p is the pitch.

The outstanding rejection cites Charles to disclose a magnetic layer having a median line and composed of a series of portions of insulating materials spaced at a pitch to extend a frequency of operation to a resonant frequency. Applicants traverse that position as Charles does not teach or suggest any operation of extending the frequency of operation of the magnetic circuit.

The purpose of the system of Charles is to minimize induced currents (circulating circuits or eddy circuit) generated in windings around a magnetic core. The induced currents cause losses in the core and damage the image efficiency.¹

In contrast to Charles, one objective of the claimed invention is to increase the output frequency of a magnetic circuit.² Such an objective in the present invention has no relation to the induced currents generated in windings around a magnetic core.

Moreover, Charles proposes to replace a large gap (causing induced currents in external windings) with several little gaps. The final total gap is determined by the sum of the individual gaps between the segments.³ The dimensions of the gaps given by Charles are dimensions given just so as not to increase the bulk loss of the circuit.⁴

Again in contrast to Charles, according to the claimed invention, one purpose of which is to extend the frequency of operation of the magnetic circuit, the width e and the pitch p of the gaps or walls are determined such that the resonant frequency f_r is given by relationship:

$$f_r = \sqrt{C \left(\frac{1}{\mu_s} + \frac{e}{p} \right)}$$

in which C is a constant, μ_s is static value of intrinsic permeability, e is the width of the plurality of gaps, and p is the pitch. Charles is silent to a resonant frequency f_r satisfying the above-noted relationship. Applicants again also note the outstanding Office Action has not even addressed the above-noted positively recited claim feature.

Applicants further note the Office Action states in the response to the previously presented arguments that "Applicant has not claimed any specific structure to control operating frequencies or act on the demagnetizing field differentiating from that shown by

¹ Charles at column 1, lines 15-35 and column 2, lines 44-46.

² See for example the present specification at page 4, lines 12-17.

³ Charles at column 3, lines 62-64.

⁴ Charles at column 2, lines 45-46.

Charles.... Applicant has not claimed any specific relationships to provide specific frequencies".⁵

The above-noted basis for maintaining the outstanding rejection appears not to have considered previously presented claims 41-44, which features are now recited in respective independent claims 29 and 38-40. The above-noted claim features clearly set forth specific structure and relationships believed to clearly distinguish over the teachings in Charles.

In view of these foregoing comments, applicants respectfully submit the claims as currently written clearly distinguish over the teachings in Charles.

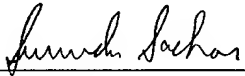
As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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⁵ Office Action of August 5, 2004, page 3, first paragraph.